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A.D. 1872, 21<sup>st</sup> AUGUST. N<sup>o</sup> 2433.

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SPECIFICATION

OF

BRISTOW HUNT.

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PHYSIOLOGICAL BATTERY.

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LONDON:

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1872.







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A.D. 1872, 21st AUGUST. N° 2483.

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### Physiological Battery.

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LETTERS PATENT to Bristow Hunt, of No. 1, Serle Street, Lincoln's Inn, in the County of Middlesex, Gentleman, for the Invention of "AN IMPROVED PHYSIOLOGICAL OR 'BUTTON' BATTERY."—A communication from abroad by Alfred Charles Garratt, of Boston, Massachusetts, United States of America.

Sealed the 28th January 1873, and dated the 21st August 1872.

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PROVISIONAL SPECIFICATION left by the said Bristow Hunt at the Office of the Commissioners of Patents, with his Petition, on the 21st August 1872.

I, BRISTOW HUNT, of No. 1, Serle Street, Lincoln's Inn, in the County of Middlesex, Gentleman, do hereby declare the nature of the said Invention for "AN IMPROVED PHYSIOLOGICAL OR 'BUTTON' BATTERY," (a communication to me from abroad by Alfred Charles Garratt, of Boston, Massachusetts, United States of America,) to be as follows:—

This Invention relates to an improved physiological or "button" battery, and has for its objects the attainment of greater elasticity in application, and the production of a simple "one element battery" as a

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*Hunt's Improved Physiological or "Button" Battery.*

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whole; the result of the improved construction being that the equivalent of a copper and zinc pair of plates is utilized.

The Invention consists in adjusting buttons or discs of copper or silver and of zinc or alloy (or their equivalents in dissimilar metals) upon a flexible insulation as a base, with metallic connections upon the back, 5 the whole being arranged and constructed so that the battery is made pliable and durable, and capable of being worn upon any uneven surface of the body or limbs.

The copper or silver and the zinc or zinc and magnesium buttons or discs are attached to the flexible base by means of metal eyes rivetted 10 or soldered into a metal plate, and connected upon the back of the battery by copper wires in all directions, such as crosswise, diagonally, & lengthwise, making the metallic connections between the buttons perfectly sure. Or the buttons may be connected in pairs, so that if one or more wires break the action is not interrupted. Between the 15 flexible back and the front rubber or other suitable insulation is applied for protection against outside influences.

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**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Bristow Hunt in the Great Seal Patent Office on the 20th February 1873. 20

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, BRISTOW HUNT, of No. 1, Serle Street, Lincoln's Inn, in the County of Middlesex, Gentleman, send greeting.**

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-first day of August, in the year 25 of our Lord One thousand eight hundred and seventy-two, in the thirty-sixth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Bristow Hunt, Her special licence that I, the said Bristow Hunt, my executors, administrators, and assigns, or such others as I, the said Bristow Hunt, my executors, administrators, 30 and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "AN IMPROVED PHYSIOLOGICAL OR 'BUTTON' 35



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*Hunt's Improved Physiological or "Button" Battery.*

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BATTERY" (a communication to me from abroad by Alfred Charles Garratt, of Boston, Massachusetts, United States of America), upon the condition (amongst others) that I, the said Bristow Hunt, my executors or administrators, by an instrument in writing under my, or their, or  
5 one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

10 NOW KNOW YE, that I, the said Bristow Hunt, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement in writing, and on reference being had to the accompanying Drawing, that is to say:—

15 This Invention relates to an improved physiological or "button" battery, and has for its objects the attainment of greater elasticity, and the production of a simple "one element battery" as a whole; the result of the improved construction being that the equivalent of a copper and zinc pair of plates is utilized.

20 The improved battery is illustrated on the accompanying Drawings in Figures 1 and 2, being a front and a back view respectively.

The Invention consists in adjusting buttons or discs of copper or silver and of zinc or alloy (or their equivalents in dissimilar metals) upon a flexible insulation as a base, with metallic connections upon the back,  
25 the whole being arranged and constructed so that the battery is made pliable, durable, and capable of being worn upon any uneven surface of the body or limbs.

$a$  represents zinc or zinc and magnesium, and  $c$  copper or silver buttons or discs which are attached to a flexible base  $A$  by means  
30 of metal eyes rivetted or soldered into metal plates  $b$ , see Figure 2, and connected upon the back of the battery by copper wires  $d$  in all directions, such as crosswise, diagonally, and lengthwise, making the metallic connections between the buttons perfectly sure. Or the buttons may be connected in pairs thus,  $a^1, a^2, a^3$ , with  $c^1, c^2, c^3$ , or with  $c^3, c^2, c^1$ ,  
35 so that if one or more wires break the action is still uninterrupted. Between the flexible back  $B$  and the front rubber or other suitable material  $C$  is applied for protection against outside influences. The



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*Hunt's Improved Physiological or "Button" Battery.*

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superior flexibility of this improved battery renders it the most convenient and effective in the treatment of old indolent ulcers, and for wear upon uneven bony surfaces or projections of the body and limbs, as upon the spine, ankles, or wrists, which results cannot be attained with any other form of battery. 5

These advantages are secured by the use of the connecting wires at the back, which allow of the buttons or discs being used upon a base, the whole being flexible.

The use of the single element of zinc and copper is valuable, and well known to the medical profession, but the batteries have hitherto been made of stiff and uncomfortable materials, and so far impracticable that they could not be adapted to the parts desired with a surface large enough to effect a cure; but according to the present Invention the single element battery is made very available and more fitted to perform its functions properly. 15

Having now described the nature and object of the said Invention for "An Improved Physiological or 'Button' Battery," together with the manner in which the same is to be or may be performed or carried into practical effect, I would remark in conclusion that I claim as the Invention (communicated to me by the above-named Alfred Charles Garratt,) 20 the improved construction and application of a well-known form of physiological battery substantially as above described, and is illustrated on the accompanying Drawings, whereby such battery is rendered much more advantageous and available in its application and reliable in its use for the purposes above set forth. 25

In witness whereof, I, the said Bristow Hunt, have hereunto set my hand and seal, this Twentieth day of February, in the year of our Lord One thousand eight hundred and seventy-three.

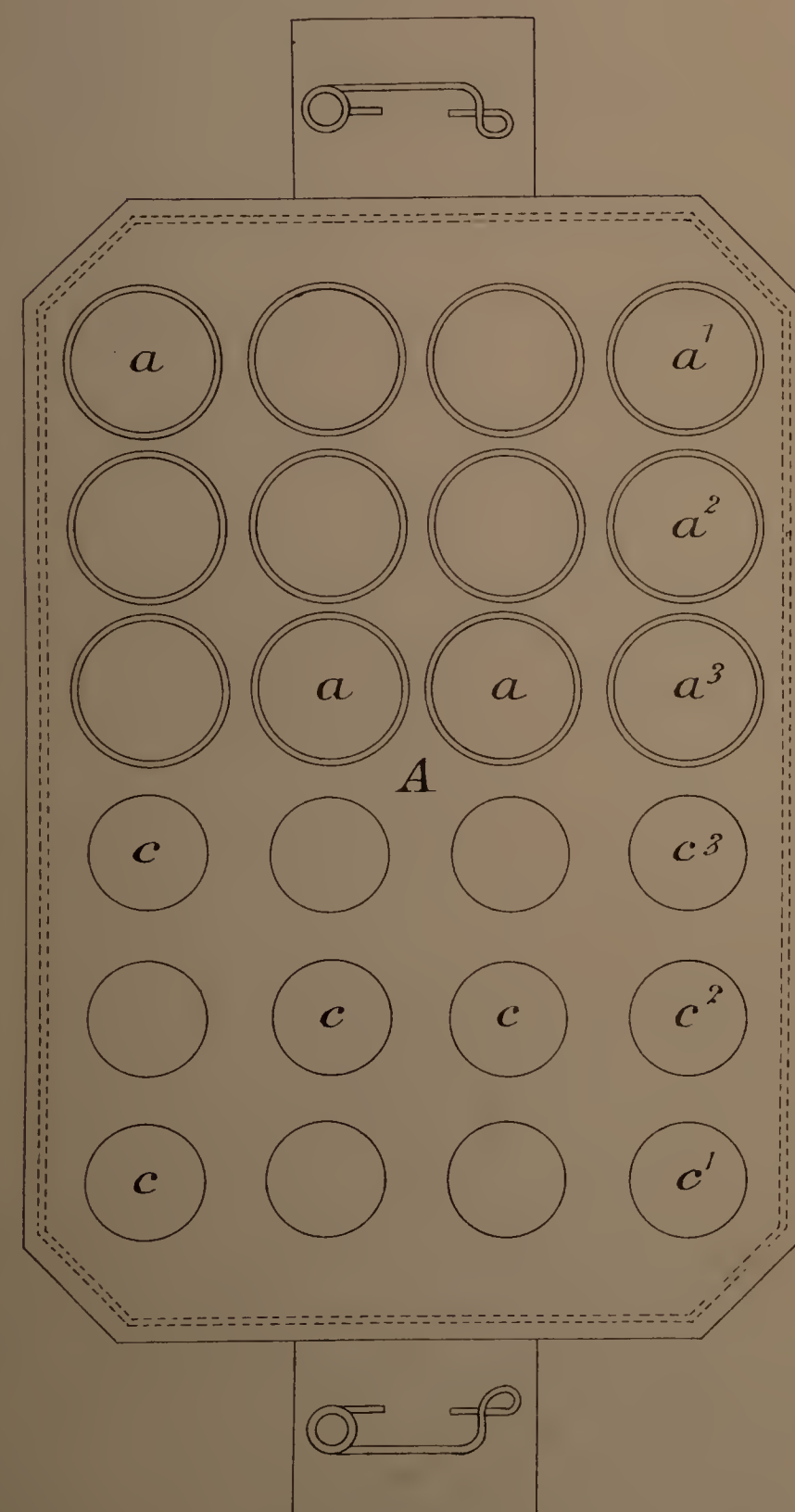
BRISTOW HUNT. (L.S.)

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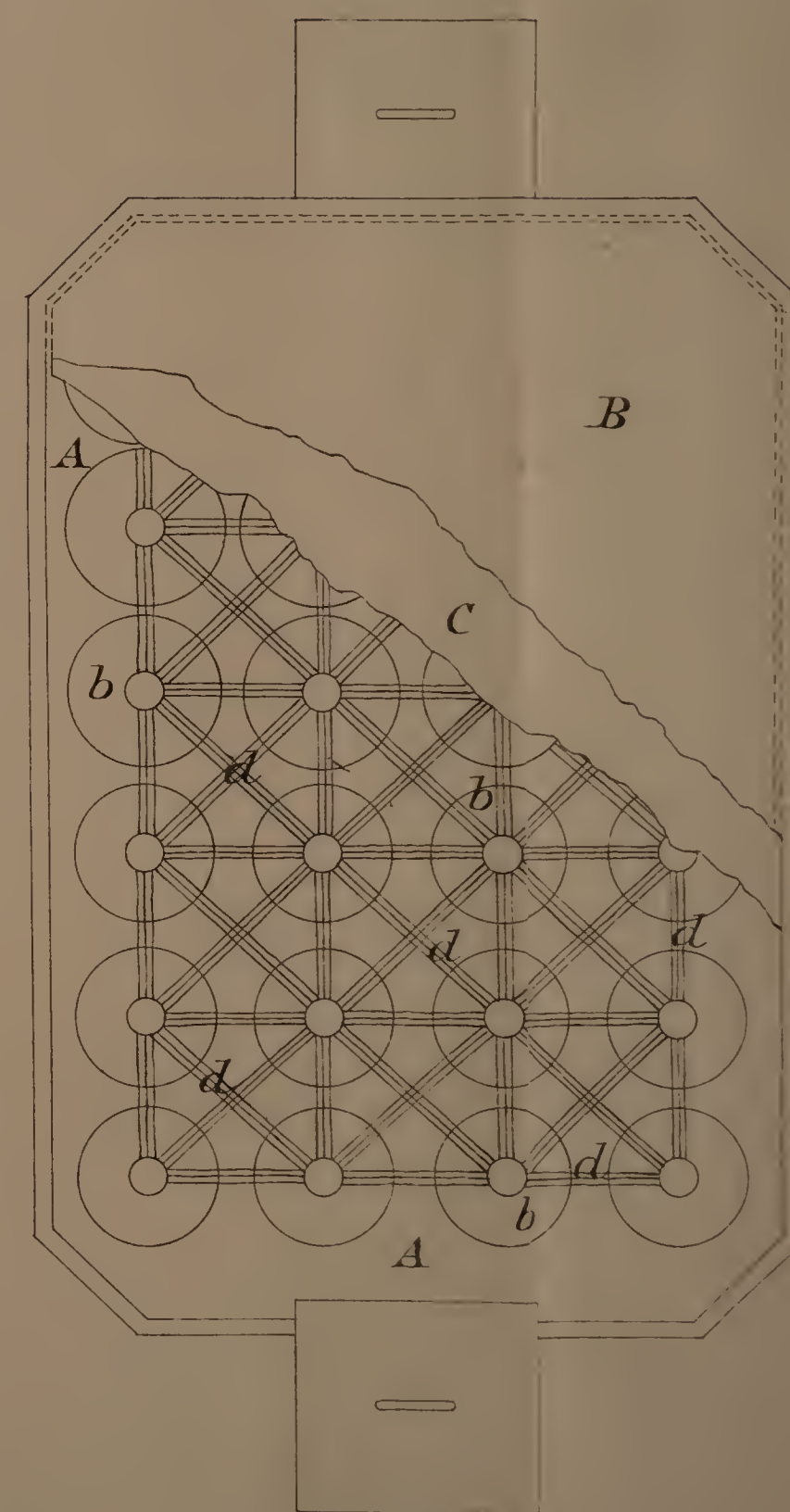
LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1873.

F I C . 1 .



F I C . 2 .



The filed drawing is not colored.

Drawn on Stone by Malby & Sons.



